

SOV/109-3-8-17/18

AUTHORS: Alekseyeva, A.P., Basalayeva, N. Ya., Yelinson, M.I., Zernov, D. V., Kul'Varaskaya, B.S., Lifshits, T.M., Savitskaya, Ya.S., Sena, L.A., Shabel'nikova, A.E. and Yurosova, V. Ye.

TITLE: The Eighth All-Union Conference on Cathode Electronics (8-ye vsesoyuznoye soveshchaniye po kathodnoy elektronike)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 8, pp 1092 - 1103 (USSR)

ABSTRACT: The conference took place during October 17 - 23, 1957, in Leningrad at the Fiziko-tekhicheskii institut AN SSSR (Physics- engineering Institute of the Ac.Sc. USSR). It was organized by the Soviet Ac.Sc. and was attended by Soviet scientists from Moscow, Leningrad, Kiyev and other towns of the Soviet Union as well as by delegates from Hungary, Czechoslovakia and Romania. Altogether, over one hundred lectures were delivered at the conference. These were divided into the following sections; thermionic emission and the technology of thermionic cathodes; secondary electron emission; photo-electron emission; field electron emission; cathode conductivity phenomena; ionic processes and gas discharges. Some of the papers

Card1/2

SOVEL09-3-8-17/18
The Eighth All-Union Conference on Cathode Electronics

read at the conference are published in the present issue of the journal: in fact, all the papers in this issue were read at the conference. Some of the papers were published in an earlier issue of the journal (Vol 2, Nr 12, 1957). A number of papers from the conference are being published in "Izvestiya A SSSR, Ser. Fiz". Nrs 4 and 5 and also in various other journals. The present report gives brief summaries of a large number of the papers presented at the conference.

SUBMITTED: February 4, 1958

Card 2/2

1. Cathodes (Electron tube)
2. Thermionic emission
3. Secondary emission
4. Photoemission
5. Field emission

807/109-3-2-19/20

AUTHORS: Basalayeva, N. Ya. and Savitskaya, Ya. S.

TITLE: News Item (Kronika)

PERIODICAL: Radiotekhnika i elektronika, 1958, Vol 3, Nr 9,
pp 1221-1222 (USSR)

ABSTRACT: The Inter-Departmental Seminar on Cathode Electronics (10th Session) (Mezhduevdomstvennyy seminar po katodnoy elektronike (10-ye zasedaniye)). The 10th Session of the Interdepartmental Seminar on cathode electronics took place on May 5, 1958, in the Institute of Radio Engineering and Electronics of the Soviet Academy of Sciences. The following lectures dealing with the problems of oxide cathode technology were read and discussed: 1) Yu. N. Buznikov read a paper entitled "Double-layer oxide cathodes". 2) A. L. Shustina et alii reported some results on the investigation of the processes taking place in an oxide cathode during its activation. 3) L. M. Lipkovskiy gave a lecture entitled "Analysis of the grid currents in a triode and investigation of the parameters of an oxide cathode". 4) A.A.Yeroshenkov

Card 1/2

SOV/109-3-9-19/20

News Item

spoke on "Investigation of the factors increasing the insulation strength of the heaters in oxide cathodes". 5) B. D. Luft dealt with the problem of the application of aluminum suspensions for the electro-phoretic coating of the heaters in receiving tubes. 6) I. L. Gandel'sman described the construction and the operation of an experimental equipment for the coating of the heaters by using a corona discharge. 7) M. Yu Gorina presented some results on the investigation of the cathaphoretic coating of thorium-oxide cathodes. 8) V. P. Dzerganovskiy et alii dealt with the problem of preparing high temperature joints of thorium and lanthanum boride with molybdenum, tungsten and tantalum. 9) V. C. Neshpor and G. V. Samsonov gave some data on "The problem of the emissive characteristics of the hexaborides of rare-earth metals".

SUBMITTED: June 4, 1958.

Card 2/2

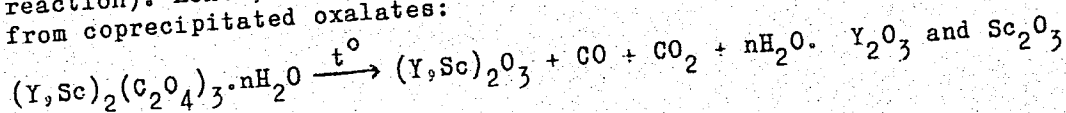
S/078/60/005/010/013/021
B004/B067

AUTHORS: Savitskaya, Ya. S., Gurevich, M. A., Kalabukhova, S. V.,
Sitnikova, S. I.

TITLE: The Problem of the Formation of Solid Solutions in the
System Y_2O_3 - Sc_2O_3 by Means of Thermal Decomposition of the
Isomorphously Coprecipitated Yttrium - Scandium Oxalate

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 10,
pp. 2300-2306

TEXT: In the introduction, the authors point out that the formation of
solid solutions of oxides and rare earths by sintering directly mixtures
of oxides has certain disadvantages (high temperatures, long duration of
reaction). Hence, they studied the possibility of obtaining such solutions
from coprecipitated oxalates: ✓



Card 1/3

(pure Y_2O_3)

The Problem of the Formation of Solid
Solutions in the System $Y_2O_3 - Sc_2O_3$ by Means
of Thermal Decomposition of the Isomorphously
Coprecipitated Yttrium - Scandium Oxalate

S/078/60/005/010/013/021
B004/B067

to $a = 9.85 \text{ kX}$ (pure Sc_2O_3). There are 2 figures, 5 tables, and 20
non-Soviet references.

SUBMITTED: July 27, 1959

Card 3/3

54700

25058
S/080/60/033/010/007/029
D206/D306

AUTHORS: Savitskaya, Ya.S., and Orlovskaya, L.D.

TITLE: Preparation of thin films of yttrium oxide by an electrophoresis method

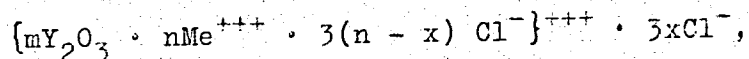
PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2222 - 2225

TEXT: The present study was made in order to recommend certain conditions for electrophoretic precipitation of thin films (80 - 100 μ) of yttrium oxide Y_2O_3 from its alcoholic suspension. First the best medium in which to carry out the precipitation had to be decided. Methanol, ethanol, n-butanol, isopropanol and acetone were tried and as a result ethanol redistilled and absolute, was found to be the best medium. The raw material, Y_2O_3 , was first ground in a ball-mill for from 42 to 50 hours. Particle size/time curves are shown giving the content of the fractions (%), and the particle size (μ). The content of Y_2O_3 in the suspension was maintained at Card 1/4

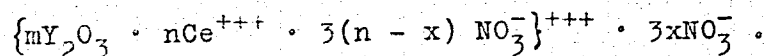
25058
S/080/60/033/010/007/029
D206/D306

Preparation of thin films ...

15 % for all experiments. Fig. 2 shows the electrical lay-out and the bath for electrophoresis. 1) Bath with anode and cathode; 2) Mechanism for supporting the object to be coated; 3) Foot starter for the droplet disperser; 4) Motors for stirring and the droplet disperser; 5) Voltage stabilizer; 6) Voltage regulator LATR-1; 7) Distributor. Counteracting ions are those of chlorine, and micelles containing these can be represented by the formula:



where Me is essentially a rare-earth metal. The formation of micelles from washed Y_2O_3 is only effected by absorption of ions on the latter. The formula of the micelle of the suspension of washed Y_2O_3 may be represented:



Excess of the added electrolyte lowers the quality of the coating

Card 2/4

25058

S/080/60/033/010/007/029
D216/D306

Preparation of thin films ...

as well as the adhesion to the basic metal. It is concluded that
1) The study of the aggregate stability of various limiting suspen-
sions of Y_2O_3 led to the choice of ethanol as a dispersion medium.

A 1 % solution of $Ce(NO_3)_3$ in ethanol served as an activating elec-
trolyte. The Y_2O_3 content in the suspension was maintained at 15 %.

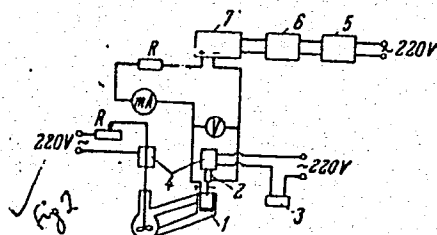
2) The relationship between the quantity of electrolyte added, the
 ζ -potential, the voltage on the electrodes and the density of the
layer of Y_2O_3 was studied. Graphs were constructed based on these
data and from them suitable conditions could be selected which
would give layers of different density. 3) The voltage range which
gave the best quality coatings was 40 to 50 V.. There are 8 figures.

SUBMITTED: January 14, 1959

Card 3/4

Preparation of thin films ...

Fig. 2.



Card 4/4

29321

S/109/61/006/010/019/027
D/246/D302

9, 3130 (1003, 1138, 1140, 1137)

AUTHOR: Basalayeva, N.Ya., Yekimenko, T.M., Yelinson, M.I.,
Ernov, D.V., Savitskaya, Ya.S., and Yasnopol'skaya,
A.A.

TITLE: Investigating some properties of a cold magnesium-
oxide cathode with self-enhancing emission

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 10, 1961,
1720 - 1740

TEXT: The aim of this work was to study some properties of cold
magnesium oxide cathodes which were not investigated in technical
literature. In the experimental apparatus, cathodes made by cata-
phoresis and spraying were used, with varying thicknesses (6 - 35 μ
and 12-60 μ , respectively). They both had high porosity (80 % of
the total volume). They had nickel substrate of the type NM (mag-
nesium added) and platinized nickel. The instrument used was a
diode with tubular cathode of oval cross-section and a mesh-anode.
The starter used was a thin (100 μ ϕ) tungsten filament. The ca-
Card 1/6

Investigating some properties ...

29321
S/109/61/006/010/019/027
D246/D302

thode was activated by baking it for 10 min. at 850°C. Number of specimens approx. 400. Their volt-ampere characteristics corresponded to those in the literature. a) To investigate the effect of oxygen, specimens were oxidized in cycles, at 850°C in atmosphere, starting at 0.1 mm of Hg pressure. Then the max. stable current, I_e was measured with the corresponding potential difference, U_a , between anode and cathode. I_e/U_a was then taken as an approximate criterion of the quality of the cathode. Fig. 4 shows I_e/U_a as a function of the number of cycles (N) for cataphoresis cathodes. Fig. 5 - the same for sprayed cathodes. The same types of curves were obtained for platinized nickel substrate (Pt layer ~50 μ thick), which proves that NiO layer does not play any significant role in the mechanism of emission. b) Investigation of temperature-dependence showed that there are both reversible and irreversible changes of the emission. If the cathode is heated higher than 400°C, irreversible processes start. It was shown that heating up the MgO layer is responsible for limiting current density, hence, improvement by its cooling. c) The time dependence of the starting process was also investigated. It was shown that it is sufficient to

Card 2/6

Investigating some properties ...

29321
S/109/61/006/010/019/027
D246/D302

illuminate the cathode to start the cold emission. On the other hand the decrease of the incandescence of the starter electrode greatly increases the starting time. d) The influence of the presence of a magnetic field is shown in Fig. 14. e) The increase in thickness (up to 30 - 40 μ) of sprayed cathodes improves their emissive properties. The opposite is true for cataphoresis cathodes, but comes from single centers, situated in cracks for thick ones. g) By positively charging up the MgO layer, it was impossible to start the emission, thus it is necessary to introduce a small amount of free electrons for starting. At the end the authors discuss the various hypotheses proposed in technical literature to explain the effect and state they intend to test them in their future experiments. There are 14 figures and 11 references: 6 Soviet-bloc and 5 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: D. Dobischek, Electronics and Commun., 7, 5, 26, 1959; A.M. Skellett, B.G. Firth, D.W. Mayer, Proc. I. E.E., 47, 10, 1704, 1959; Y. Mizushima, Y. Igarashi, T. Imai, J. Phys. Soc. Japan, 15, 4, 729, 1960; H.N. Daglish, Proc. I. E.E., 108B, 37, 103, 1961.
SUBMITTED: May 23, 1961
Card 3/6

S/078/62/007/009/001/007
B144/B101

AUTHORS: Savitskaya, Ya. S., Tvorogov, N. N., Kalabukhova, S. V.,
Brykina, L. S.

TITLE: Thermal decomposition of yttrium, scandium, and lanthanum
oxalates

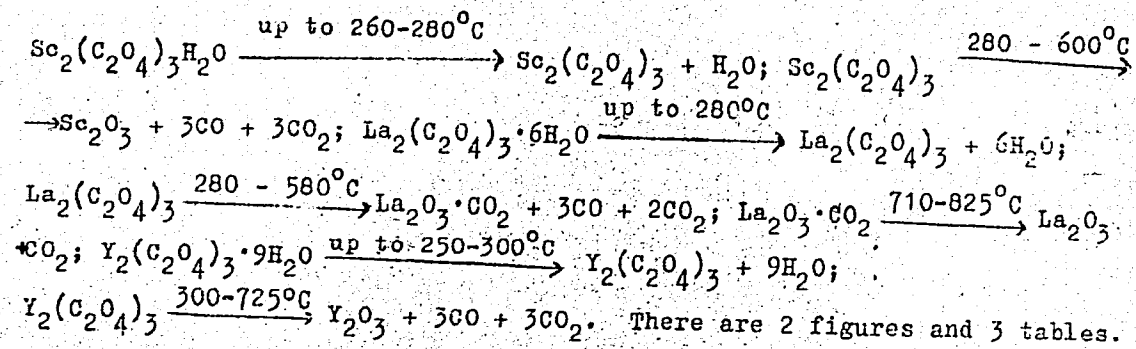
PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 9, 1962, 2029-2033

TEXT: Y, Sc and La oxalates are synthesized from the corresponding chlorides and oxalic acid. Their decomposition in air was investigated by thermographic, thermogravimetric, and gas analyses. Decomposition proceeds with evolution of CO_2 and CO. Thermal analysis reveals 3 decomposition stages: 1) separation of crystal water; 2) gradual decomposition of oxalates with evolution of CO and CO_2 ; 3) formation of oxides. The exothermic effects occurring predominantly at $>300^\circ\text{C}$ are due to the oxidation of CO to CO_2 in air, this being proved by the absence of exothermic effects when Y oxalate decomposes in He atmosphere. The decomposition patterns suggested are:

Card 1/2

Thermal decomposition of yttrium,...

S/078/62/007/009/001/007
B144/B101



There are 2 figures and 3 tables. ✓

SUBMITTED: November 27, 1961

Card 2/2

SAVITSKAYA, Ya.S., TVOROGOV, N.N.; KALABUKHOVA, S.V.; BRYKINA, L.S.

Thermal decomposition of yttrium, scandium, and lanthanum
oxalates. Zhur.neorg.khim. 7 no.9:2029-2033 S '62. (MIRA 15:9)
(Rare earth oxalates)

L 10490-63

EWT(1)/EWG(k)/EWT(m)/BDS/ES(w)-2--AFFTC/ASD/ESD-3/SSD--

Pz-4/Pab-4--AT/RH

ACCESSION NR: AP3000574

S/0109/63/008/005/0881/0883

AUTHOR: Basalayeva, N. Ya; Yelinson, M. I.; Zernov, D. V.; Savitskaya, Ya. S. 13

TITLE: The role of porosity of cathodes with self-sustained emission

SOURCE: Radiotekhnika i elektronika, v. 8, no. 5, 1963, 881-883

TOPIC TAGS: cold cathode, self-sustained emission, nonporous surface, emitter porosity, current emission, anode voltage, dielectric material, uniform magnetic field

ABSTRACT: A device has been developed for the investigation of the distribution of cold-cathode self-sustained emission from a nearly nonporous surface in order to establish a correlation between the emission phenomenon and emitter porosity. Al_2O_3 was selected as the dielectric material because of its low porosity and was deposited in thicknesses between several hundred and several thousand Angstroms. The entire device was placed in a uniform magnetic field directed perpendicular to the cathode surface, so that the pattern of current emission could be observed on a fluorescent screen. The behavior of emission as a function of anode voltage and time elapsed after the application of starting current is described. After

Card 1/2

L 10490-63

ACCESSION NR: AP3000574

testing, the tube was dismounted and the distribution of pores in the Al_2O_3 layer was investigated. The results showed that at film thicknesses above 1000 Å the emission originated from 1 to 3 centers located close to the cathode ends, where the film was apparently thinner and contained fissures. The main part of the cathode, where no pores were detected, did not emit. In films of several hundred Angstroms in thickness the presence of individual point centers of emission, densely and uniformly distributed on the cathode surface, and a corresponding pattern of porosity distribution were observed. It appears from the Al_2O_3 tests that some porosity is a requisite for self-sustained emission. However, this conclusion should not be arbitrarily extended to other dielectric materials, which may possibly emit from compact (non-porous) layers. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 12Jan63

DATE ACQ: 30May63

ENCL: 00

SUB CODE: .PH

NO REF SOV: 002

OTHER: 001

85/04
Card 2/2

ACCESSION NR. AP4032500

S/0080/64/037/004/0796/0800

AUTHOR: Savitskaya, Ya. S.; Ryabova, L. A.

TITLE: Preparation of thin films of zinc oxide

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 4, 1964, 796-800

TOPIC TAGS: thin film, zinc oxide, film preparation, thermal decomposition, zinc propionate, film property

ABSTRACT: A method previously unknown in literature is described for producing thin (0.1--2 μ) films of zinc oxide by thermal dissociation of zinc propionate vapors on heated tantalum or tungsten substrates. Zinc propionate crystals were synthesized, and their vapor pressure was determined in the 110--250C range. The equipment for preparing the films included a reaction vessel made of glass and a high-vacuum system. Before the actual film deposition, the metal substrate was degassed by heating in a high vacuum, which assured proper conditions for depositing sufficiently pure films. The film deposition was effected by heating zinc propionate and the metal

Card 1/2

ACCESSION NR: AF4032500

substrate simultaneously but separately and by eliminating the reaction products from the vessel periodically or continuously. The optimal operating temperatures were 250C for zinc propionate and 450C for the substrate. Deposition of films 0.1--0.2 μ thick took no more than 10 min. The films had an oriented structure. Dense, transparent, and uniformly thick films of ZnO were obtained with an electrical resistivity in the 10^9 -- 10^{10} $\Omega \cdot \text{cm}$ range. Films more than 2 μ thick could not be obtained under the stated conditions. The opinion is expressed that variation of film thickness can be achieved by varying the rate of admission of zinc propionate vapors into the reaction zone. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 24May62

DATE ACQ: 11May64 ENCL: 00

SUB CODE: CH,PH

NO REF SOV: 004 OTHER: 007

Card 2/2

IVANOV, G.A.; RYABOVA, L.A.; SAVITSKAYA, Ya.S.; MATSKEVICH, I.L.;
CHELYSHKOV, S.P.

Second Scientific Session of the Science Council on Physical
Electronics. Radiotekh. i elektron. 10 no.6:1165-1166 Je '65.
(MIRA 18:6)

L 1383-66 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(i)/EPA(w)-2/EWP(j)/EWP(t)/EWP(b)/
ETC(m) IJP(c)/RPL JD/WW/RM/WH

ACCESSION NR: AP5021670

UR/0080/65/038/008/1862/1863

AUTHOR: Ryabova, L. A.^{44, 55}; Gerasimova, E. A.^{44, 55}; Savitskaya, Ya. S.^{44, 55} 661.862.22 69 63 8

TITLE: The problem of obtaining thin films of aluminum oxide 15, 44, 55

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 8, 1965, 1862-1863

TOPIC TAGS: thermal decomposition, ethyl alcohol, acetone, aluminum com-
pound, aluminum oxide, metal film 21

ABSTRACT: The article is an attempt to analyze the conditions necessary to obtain aluminum ethylate, taking into account the composition of starting materials. Experiments established the possibility of obtaining aluminum oxide films by thermal decomposition of aluminum acetylacetone and optimum operating conditions were determined: heating temperature of aluminum acetylacetone--240-250C; temperature of the backing--680-700C. It was found that phase composition of the films depends on the nature of the starting materials. Thus, films obtained by decomposition of aluminum acetylacetone contain only gamma phase aluminum

Card 1/2

L 1383-66

ACCESSION NR: AP5021670

oxide, while films obtained by the decomposition of aluminum ethylate contain a mixture of the alpha and gamma phases of aluminum oxide. "We wish to take this opportunity to thank L. A. Zernov and V. U. Rebezov for aid in carrying out the experiment. " Orig. art. has: 2 figures ^{44,55} 44,55

ASSOCIATION: None

SUBMITTED: 02Sep63

ENCL: 00

SUB CODE: SS, MM

NR REF SOV: 001

OTHER: 002

Card 2/2

L 3991-66 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(1)/ETC/ENG(m)/EPA(W)-2/1/EWP(c)/EWT(R)
 ACC NR: AP5025655 EWP(b)/EWA(c)/EPF(c)-2 IJP(c) UR/0080/65/038/010/2222/2226
 JD/WW/JG/AT/WH 537.363+546.261+546.831

AUTHOR: ³⁵Savitskaya, Ya. S.; ^{44 55}Yekimenko, T. M.; Zhivulina, L. I. ^{44 55}

TITLE: Preparation of thin zirconium carbide layers by electrophoresis

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 10, 1965, 2222-2226

TOPIC TAGS: zirconium carbide, refractory coating, ¹⁵electrophoresis

ABSTRACT: A study, claimed to be the first of its kind, has been made of depositing thin (80—100 μ) ZrC layers on metallic substrates by electrophoresis of a ZrC suspension in alcohol. Two problems were studied: 1) preparation of stable ZrC suspensions; and 2) establishment of the optimum depositing conditions. Study of the stability of organic ZrC suspensions resulted in the selection of ethyl alcohol as the dispersive medium and in the addition of 0.5% solution of HFCl_4 in absolute ethyl alcohol as generator of the electric charge on the particle surface. Suspensions of the following composition were selected for the experiments: absolute alcohol, 80 ml; ZrC powder with 2—5 μ particle size, 20 g; 0.5% HFCl_4 solution in absolute alcohol, 0.5—2 ml. Experimental study of electrophoresis resulted in the determination of the dependence of the coating thickness and coating density on time, the electrokinetic potential (ξ) of the particles, and cell potential. From these data curves were plotted which made it possible to select conditions for depositing ZrC coatings of the desired quality. Orig. art. has: 8 figures. [B0]

Card 1/2

L 3991-66

ACC NR: AP5025655

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: OC, CC

ATD PRESS: 4/20

CC

Card 2/2

ACC NR: AF5016680

SOURCE CODE: UR/0109/65/010/006/1164/1166

AUTHOR: Ivanov, G. A.; Ryabova, L. A.; Savitskaya, Ya. S.; Matskevich, T. L.; Chelyshkov, S. P. 53
B

ORG: none

TITLE: Second Scientific Session of the Scientific Council on Physical Electronics

SOURCE: Radiotekhnika i elektronika, v. 10, no. 6, 1965, 1164-1166

TOPIC TAGS: physics conference, chemisorption, adsorption, semiconductor device, secondary electron emission, photoelectric property, thermoelectric property

ABSTRACT: The second session of the conference on physical electronics was held 23-24 Nov 1964, with 142 delegates from 41 organizations in attendance to hear 18 reports in 3 sessions. The first session was dedicated to the question of chemisorption of various gasses on the surfaces of solids and questions of emission and antiemission coatings. The properties of chemical adsorption, as well as the influence of chemical adsorption on the operation of semiconductors and the structure of adsorbed films on crystals. Another reporter noted that the antiemission property of gold appears to take place only in the system gold-barium, not with barium oxide. The second session was dedicated

Card 1/2

UDC: 061.3: 621.38:5³

L 25921-66

ACC NR: AP6016680

to the questions of thermoelectronic, photoelectronic and secondary electron emission, and included reports on statistical and distribution studies of these types of emission. The subject of the third session was autoelectron emission, which included various theories to explain the phenomenon and a report on a study of the power spectrum of autoelectrons from germanium layers on tungsten. [JPRS]

SUB CODE: 20, 07 / SUBM DATE: none

Card 2/2 *pla*

EL'KINA, Yu.A.; RUSANOVA, Z.K.; SAVITSKAYA, Ye.A.

Pancreatic function in epidemic parotitis. Zdrav. Bel. 7
no. 4:51-53 Ap '61. (MIRA 14:4)

1. Iz kafedry infektsionnykh bolezney (zaveduyushchiy - chlen-
korrespondent AMN SSSR professor A.N. Filippovich) Minskogo
meditsinskogo instituta.
(MUMPS) (PANCREAS)

USSR/Pharmacology. Toxicology. Antibiotics. V

Abs Jour: Ref. Zhur. - Biol., No 22, 1958, 102996

Author : Savitskaya, Ye. I.

Inst : -

Title : On the Mechanism of Action of Some Antibiotics
in Epidemic Typhus. II. The Action of Synthomycin
and Levomycetin on the Course of Experimental
Epidemic Typhus in Guinea Pigs.

Orig Pub: Zh. mikrobiol., epidemiol. i immunobiologii,
1955, No. 11, 62-67

Abstract: No abstract

Card 1/1

38

SAVITSKAYA, Ye. M.

USSR/Chemistry - Foams

May/Jun 51

"Investigation of the Stability of Monodisperse Foam," Ye. M. Savitskaya, P. A. Rebinder, Chair of Colloid Chem, Moscow State U imeni M. V. Lomonosov

"Kolloid Zhur" Vol XIII, No 3, pp 200-207

Expanded treatment of identical subject covered by article "Stability of Monodisperse Foam," same authors, "Dok Ak Nauk SSSR" Vol LXXVI, No 3, 1951, pp 427-429 (cf. FDD Per Abs 178T14).

ID

183T20

CA

Analysis of the dispersity of foams. E. M. Savitskaya (Univ. Moscow). *Kolloid. Zhur.* 13, 300-13(1951); cf. C.A. 45, 8321i. The foam is placed in a tray whose bottom is cooled with liquid O; the foam solidifies within a few sec. and is then photographed through a glass cover. Freezing and thawing did not affect the dispersity. In a foam produced by bubbling air through a sintered glass membrane into a 0.125% soln. of Na 6-butyl-naphthalene-1-sulfonate (1) the most frequent bubble radius r was 50 μ , and there were almost no bubbles with r greater than 150 μ . The frequency distribution of bubbles was the same in the surface layer and in any section of the foam. The most frequent r (in μ) and the total area (S sq. cm.) in 1 cc. of another 1 foam depended on concn.; for 2%, 0.5%, 0.25%, 0.125%, and 0.06% solns. they were 80-90 and 300; 90-100 and 330; 100-110 and 270; 100-110 and 250, and 120-130 and 210, resp. The surface tension (γ ergs/sq. cm.) of these solns. was 30, 32, 38, 52.5, and 60, resp., and the product γS was almost const., i.e. the work necessary to disperse 1 cc. of gas was almost independent of the soln.
J. J. Bikerman

USSR/Chemistry - Foams

Nov/Dec 51

"Investigation of the Structural-Mechanical Properties of Films," I. M. Rozenfel'd, Ye. M. Savitskaya, Lab of Colloid Chem, Moscow State U, Invent M. V. Lomonosov 3

"Kolloid Zhur" Vol XIII, No 6, pp 454-460

Conducted expts with concentric Al cylinders on foams of Na salt of 6-butyl-naphthalenesulfonic acid (hekal), Na salt of sulfonaphtheneic acids (Petrov catalyst), Na salt of dioctyl ester of sulfonocetic acid, Na pyridineundecylsulfonate, sap-
online, and tech foam-forming agent P-0-I. Established that foams have truly elastic region of
198T10

USSR/Chemistry - Foams
(Contd)

Nov/Dec 51

deformation. From deformation curves reached certain conclusions, including those on effect of gelatin and concn of foam-forming agent on film strength.

SAVITSKAYA, YE. M.

198T10

USSR/Chemistry - Foams

21 Jan 51

"Stability of Monodisperse Foam," Ye. M. Savitskaya,
Acad P. A. Rebindy, Sci Res Inst of Chem, Moscow
State U imeni M. V. Lomonosov

"Dok Ak Nauk SSSR" Vol LXXVI, No 3, pp 427-429

As distinguished from older investigations, work was
done on monodisperse foam. Foam on the surface of
liquid was covered by open container and investigated
(1) under free evaporation of liquid phase, (2) in sat vap
vapor of liquid phase, (3) in absence of gas space
above foam. Order of stability was $3 > 1 > 2$. Foam
obtained by means of nozzle with diam of 0.04-7 mm

178r14

USSR/Chemistry - Foams (Contd)

21 Jan 51

coalesces th 3 until size of bubbles corresponds to
those obtained with nozzle of 9.5-10 mm, this being
most stable size. Larger bubbles (15 mm) divide.
Generally, stability increases with increasing deg
of dispersion stability of column is directly propor-
tional to height of column (destruction proceeds uni-
formly); stability drops with increased contact area
foam/vapor.

178r14

SAVITSKAYA, YE.M.

SAVITSKAYA, Ye.M., kandidat khimicheskikh nauk.

Methods of clinical determination of antibiotics: penicillin, streptomycin, aureomycin and terramycin; data from foreign periodical literature for 1950-1952. Antibiotiki 6 no.2:29-44 '53. (MLBA 6:7)

(Antibiotics)

SAVITSKAYA, E. M.

2
/ 2539. Physico-chemical methods of determining antibiotics. I. Colorimetric method for determining streptomycin. E. M. Savitskaya and V. D. Kartseva (*J. anal. Chem., USSR*, 1953, 8, 46-49).—Streptomycin in acid medium gives with 2 : 4-dinitrophenylhydrazine a yellow hydrazone; the excess of the orange coloured reagent is extracted with butyl acetate and the absorption of the aq. solution containing the product of the reaction is measured at 4300 Å, by means of a differential photoelectric colorimeter. A similar reaction is given by D-mannosido-streptomycin which usually accompanies streptomycin. Otherwise the reaction is specific for streptomycin in an unpurified preparation.
G. S. SMITH.

SAVITSKAYA, E. M.

USSR/Chemistry

Card 1/1

Authors : Bruns, B. P., Savitskaya, E. M., and Petrova, T. S.

Title : Quantitative determination of oxygen dissolved in a cultured antibiotics liquid.

Periodical : Zhur. Anal. Khim, 9, Ed. 1, 42-46, Jan-Febr. 1954

Abstract : Proposal was made for the construction of an electrolytic cell for the determination of oxygen dissolved in liquid. The method of determining the amount of oxygen dissolved in a cultured antibiotics liquid is described. There are two major difficulties in determining oxygen in a cultured liquid: 1) during and after the removal of the cultured liquid sample from the fermentation vessel there is a continuous oxygen absorption resulted by the breathing of the microorganism. 2) The second difficulty is that the taken sample should not come in contact with the gaseous phase neither during transfer into the electrolytic cell nor in the cell proper, otherwise there will be absorption or escape of the oxygen. Three references. Graphs.

Institution : All-Union Scient-Research Institute of Antibiotics, Moscow

Submitted : July 7, 1953

SAVITSKAYA, E. M.

✓ Physicochemical methods for determination of antibiotics. 10
 II. Anthranone method for quantitative determination of
 mannosidostreptomycin. E. M. Savitskaya, B. P. Bruns,
 A. A. Korobitskaya, and V. D. Kartseva (All-Union Sci.
 Research Inst. Antibiotics, Moscow). *Zhur. Anal. Khim.*
 10, 124-7; *J. Anal. Chem. U.S.S.R.* 10, 113-15(1955)
 (Engl. translation); cf. *C.A.* 47, 5070g.—A check of the
 Kowald-McCormack method (*C.A.* 44, 2703i) led to certain
 modifications which improved its accuracy. To prep. the
 reagent dissolve 0.1 g. of anthranone in 100 ml. concd.
 H_2SO_4 , slowly add 15 ml. H_2O , and allow to stand for 1 hr.,
 after which it is ready for use. After addn. of the reagent
 to the analyzed soln. the mixt. should be kept in boiling
 H_2O for 6 min. This is to develop the max. color intensity.
 Heating for a shorter period or over 6 min. affects the color
 adversely. The procedure of analysis is given. By this
 procedure deviation did not exceed 3%. M. Hoseh

(3)

Savitskaya, E. M.

V6356. Physico-chemical methods of determining antibiotics. II. Anthrone method of determining mannitolstreptomycin. E. M. Savitskaya, B. P. Bruns, A. A. Korobitskaya, and V. D. Kartseva. *Zh. Anal. Khim.*, SSSR, 1955, 10, 124-127. — In carrying out the method of Kowald and McCormack (*Brit. Abstr. C*, 1950, 183) for determining D-mannose, errors up to $\pm 13\%$ were observed. The following method is claimed to be accurate to $\pm 3\%$. To 7 ml. of the aq. soln. of mannose or the streptomycin preparation are added, in a thin stream with continuous stirring, 23 ml. of anthrone reagent, prepared by dissolving 0.1 g. of anthrone in 100 ml. of conc. H_2SO_4 , adding 15 ml. of water, and setting aside for 1 hr. before use. The soln. is rapidly heated for 6 min. on a bath of vigorously boiling water, and then cooled in water containing ice. The optical density is determined at room temp., a red filter being used. The green colour of the soln. is stable for 4-5 hr. G. S. SMITH.

MD ③

SAVITSKAYA, Ye.M.; BRUNS, B.P.
YAKHONTOVA, L.F.; SAVITSKAYA, Ye.M.; BRUNS, B.P.

Sorption kinetics of streptomycin and the effect of sodium
on the absorption of streptomycin by hydrogen forms of
carboxylic cationites. Dokl. AN SSSR 110 no.2:249-251 S '56.
(MLRA 9:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
Predstavleno akademikom V.A. Karginym.
(Streptomycin)
(Base-exchanging compounds)

YAKHONTOVA, L.F.; SAVITSKAYA, Ye.m.; BRUNS, B.P.

Sorption rate of streptomycin by carboxylic cationites. Dokl. AN
SSSR 111 no.2:388-390 N '56. (MIRA 10:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov. Pred-
stavleno akademikom V.A.Karginym.
(Streptomycin) (Carboxyl group) (Base-exchanging compounds)

SAVITSKAYA, E.M.

484. Determination of streptomycin and manno-aldose streptomycin in culture liquids and in streptomycin intermediates. B. P. Brown, V. D. Kaitseva, E. M. Savitskaya and A. A. Korobitskaya (All-Union Sci. Res. Inst. of Antibiotics, Moscow). *Zhur. Anal. Khim.*, 1957, 18 (3), 252-254. The antibiotics are collected from a soln. at pH 8.3 to 8.8 on silica gel (Na form) and extracted in *N* H₂SO₄. The contents are determined by the malol (Schenk *et al.*, *J. Amer. Chem. Soc.*, 1945, 67, 2276) and anthrone (Savitskaya *et al.*, *Anal. Abstr.*, 1958, 2, 3188) methods. G. S. Stuart

7
483d
484j

QMB-173

IV
MAMIOFE, S.M.; SAVITSKAYA, Ye.M.; BRUNS, B.P.; SINITSYNA, Z.T.; SHELLENBERG,
N.N.

Producing streptomycin sulfate by an ion-exchange method involving
methanol. Med.prom. 12 no.1:39-42 Ja '58. (MIRA 11:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(STREPTOMYCIN) (METHANOL)

SAULIS KAYE, JR. M.

5(2),(3)

PHASE I BOOK EXPLOITATION

SOV/2554

Akademiya nauk SSR. Otdeleniye khimicheskikh nauk. Komissiya po khromatografii

Issledovaniya v oblasti ionoobmennoy, raspredelitel'noy i osadochnoy kromatografii (Studies in the Field of Ion Exchange, Distribution and Precipitation Chromatography) Moscow, Izd-vo AN SSSR, 1959. 150 p. Errata slip inserted. 3,500 copies printed.

Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: I.N. Guseva; Editorial Board: K.V. Chmutov, Corresponding Member, USSR Academy of Sciences (Resp. Ed.); F.M. Shemyakin, Professor; K.M. Ol'shanova, Professor; K.M. Saldadze, Docent, and N.N. Tunitskiy, Professor.

PURPOSE: This book is intended for chemists and chemical engineers.

COVERAGE: The book discusses studies in ion-exchange, distribution, and precipitation chromatography. Various problems of the theory of chromatography and its application are also considered. This is the 4th collection of articles published by the Committee on

Card 1/5

Studies in the Field of Ion Exchange (Cont.)

SOV/2554

Chromatography. The first collection was published in 1952 under the title: "Issledovaniya v oblasti khromatografii" (Studies in the Field of Chromatography); the second was published in 1955 under the title "Teoriya i praktika primeneniya ionoobmennyykh materialov" (Theory and Practice of the Use of Ion-exchange Materials); and the third was published in 1957 under the title "Issledovaniya v oblasti ionoobmennoy khromatografii" (Studies in the Field of Ion-exchange Chromatography). No personalities are mentioned. References are given after most of the articles.

TABLE OF CONTENTS:

Yakhontova, L.F., Ye. M. Savitskaya, and B.P. Bruns. Pseudo- and True Equilibria in Ion Exchange Processes on Carboxylic Ionites With Participation of Streptomycin	3
Davydov, A.T. and G.M. Lisovina. Study of the Sorption Value and the Exchange Energy of Cations on Wofatite With Relation to Temperature	21
Rachinskiy, V.V. Theory of the Stationary Front of Dynamic Sorption	24
Card 2/5	

Studies in the Field of Ion Exchange (Cont.)	30V/2554
Saldadze, K.M., and Ye. N. Pedotova. Effect of the Ionite Structure on the Ion Exchange Process	39
Saldadze, K.M., and Ye. A. Sheynina. Kinetics of Cation Exchange Processes on Carboxylic Cationites	48
Suyt, L.R., and F.M. Shemyakin. Purification of Salts With the Aid of an Ion-exchange Counterflow Installation	55
Fedoseyeva, O.P., N.N. Tunitskiy, and Ye. P. Cherneva. Study of the Kinetics of Complete Cation Exchange on Sulfonated Resins	63
Cherneva, Ye. P., A. B. Pashkov, S.R. Barabanov, and N.N. Tunitskiy. Change in the Selectivity of Strongly Acidic Monofunctional Cationites in Relation to the Concentration of Sulfo Groups and Interchain Bonds in Cationites	70
Fedoseyeva, O.P., Ye. P. Cherneva, and N.N. Tunitskiy. Study of the Diffusion of Ions Through a Cationite Membrane	76

Card 3/5

Studies in the Field of Ion Exchange (Cont.)	SOV/2554
Shemyakin, F.M. Organic Reagents Used in Adsorption and Distribution Chromatography, Their Classification, and Trends of Investigation	80
Mitselovskiy, E.S., and F.M. Shemyakin. Some New Phenomena Which Accompany the Process of Electromigration of Organic Substances	90
Polyanskiy, N.G. Study of Thermal Desulfonation of Sulfo-phenolformaldehyde Resin KU-1	95
Kopylova, V.D., and K.M. Ol'shanova. Precipitation Chromatography	105
Kopylova, V.D., and K.M. Ol'shanova. Secondary Phenomena in Precipitation Chromatography	113
Ol'shanova, K.M., and N.M. Morozova. Determination of Calcium by the Precipitation Chromatography Method With the Indicator Murexide	124

Card 4/5

Studies in the Field of Ion Exchange (Cont.)

SOV/2554

Ol'shanova, K.M., and Z.A. Koloskova. Ion-exchange Paper
Chromatography in Qualitative Analysis 128

Grigor'yeva, N.V. Chromatographic Method of Qualitative Analysis
for Fur Dyestuffs 134

Saldadze, K.M., K.M. Ol'shanova, and I.I. Ivanova. Sorption of
Mineral Acids and of Their Salts on Cationites 138

Gorbacheva, N.A., and K.M. Saldadze. Absorption of Complex Zinc
Anions on Anionites With Different Basicity 143

AVAILABLE: Library of Congress

Card 5/5

TM/bg
11-23-59

SAVITSKAYA, Ye.M.; YAKHONTOVA, L.F.; BRUNS, B.P.

Mechanism of ion exchange on carboxyl cationites. Vysokom. soed.
1 no.9:1416-1421 S '59. (MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(Ion exchange)

YAKHONTOVA, L.F.; SAVITSKAYA, Ye.M.; BRUNS, B.P.; KOVARDYKOVA, S.N.

Sorption of erythromycin by ion-exchange resins. Med.prom. 13 no.11:
15-18 N '59. (MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(SORPTION) (ERYTHROMYCIN) (ION EXCHANGE)

SOV/76-33-1-3/45

5(4)
AUTHORS: Yakhontova, L. F., Savitskaya, Ye. M., Bruns, B. P.

TITLE: Equilibrium Constants of the Ion Exchange Process for Carboxyl Cationites With a Streptomycin Ion Participation (Konstanty ravnovesiya ionoobmennogo protsessa na karboksil'nykh kationitakh s uchastiyem iona streptomitsina).

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 1, pp 15-19 (USSR)

ABSTRACT: It was shown in previous papers (Refs 1-3) that a real or an apparent equilibrium can exist in the sorption of streptomycin on carboxyl cationites. It was assumed (Ref 3) that the maximum capacity of the resin for Str^{3+} equals the capacity for Na^+ in the case of medium-linked (or loosely-linked) cationites. This assumption is investigated in the present case. A table (1) shows that cationites with a grain size of 0.25-0.50 mm admit Str^{3+} at a lower capacity than Na^+ , but that at a grain size of 0.08-0.12 mm the sorption of Str^{3+} in the case of the resins KFU, ROA and KB-4-P-2 is equal to that of Na^+ , whereas a distinct increase of the Str^{3+} sorption can be observed in the case of the resins KB-4, KB-1 and amberlite IRC-50. The

Card 1/3

SOV/76-33-1-3/45

Equilibrium Constants of the Ion Exchange Process for Carboxyl Cationites
With a Streptomycin Ion Participation

existence of an area of real or apparent equilibrium as a function of c_{Na^+} in solution is shown in a diagram obtained by the H-form of the cationite KB-4. The ion exchange of Na^+ with Str^{3+} was investigated in several resins (with 2 different grain sizes) (Tables 3,4). Here the Na^+ ion concentration was kept within the area of real equilibrium. According to the results, the equilibrium constant does not depend on the grain size of the cationite. The K_1 values obtained nearly coincide for some cationites. A calculation of the equilibrium constants according to S. Ye. Bresler and G. V. Samsonov's method (Ref 4) resulted in K_2 values (Tables 2,3,4) which do not coincide.

There are 1 figure, 4 tables, and 4 Soviet references.

ASSOCIATION:

Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,
Moskva (All-Union Scientific Research Institute for Anti-
biotics, Moscow)

Card 2/3

SOV/76-33-1-3/45

Equilibrium Constants of the Ion Exchange Process for Carboxyl Cationites
With a Streptomycin Ion Participation

SUBMITTED: April 30, 1957

Card 3/3

5(3, 4)
AUTHORS: ~~Savitskaya, Ye. M.~~, Yakhontova, L. F., Bruns, B. P.,
Kolygina, T. S. SOV/20-127-3-36/71

TITLE: On the Transformation of Tetracycline by Sorption With Sulpho-
cationite to Anhydrotetracycline

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3, pp 606-608
(USSR)

ABSTRACT: Tetracycline (I), a derivative of naphthacene and an anti-
biotic substance, is transformed under liberation of water
upon the sulphoresin (cationite) into anhydrotetracycline
(II), which is biologically inactive. (II) is difficultly
soluble and remains in the resin phase in a bound state.
Separation of water may be understood as inactivation. For
the investigation purest (I) - 98% - was used. The sorption
of (I) was carried out on a hydrogen cationite in a 95%
methyl-alcohol solution or in water under static conditions
at -30° . The sorbed (I) with the resin was kept in a thermo-
stat for some time at 25° , the transformation of (I) into
(II) taking place at the same time. The separation of (II)
from (I) took place under dynamic conditions in a hydrochloric
methyl-alcohol solution again at -30° . The degree of separation

Card 1/3

SOV/20-127-3-36/71

On the Transformation of Tetracycline by Sorption With Sulphocationite to Anhydrotetracycline

was photogrammetrically determined from the analysis of the precipitate. Agreement of results was attained by these two methods. It was found that (I) is transformed in the same manner in the case of all investigated sulphoresins. The resins obtained from the copolymerization of vinyl naphthalene, divinyl benzene, and styrene containing various quantities of divinyl benzene, were produced by the nauchno-issledovatel'skiy institut plastmass (Scientific Research Institute for Plastic Materials), and sulphoresin SBS-3 by the Moskovskiy khimiko-tehnologicheskii institut im. Mendeleeva (Moscow

Institute of Chemical Technology imeni Mendeleev). The resins are of different structure and have different physico-chemical properties. The rate of transformation was investigated on a highly acid resin. Figure 1 shows this rate in dependence on the concentration (II) in the precipitation. The reaction is one of first order. The smaller the quantity of free electrovalent H-ions bound to the resin, the more slowly does inactivation develop. The hydrogen ions of the cationite act catalytically. All substances participating in the transforma-

Card 2/3

SOV/20-127-3-36/71

On the Transformation of Tetracycline by Sorption With Sulphocationite to Anhydrotetracycline

tion are in the resin phase during transformation. The investigation is of interest for the conservation of active (I). There are 1 figure and 2 references, 1 of which is Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov
(All-Union Scientific Research Institute for Antibiotics)

PRESENTED: January 23, 1959, by V. A. Kargin, Academician

SUBMITTED: January 13, 1959

Card 3/3

LOU CHZHI-SYAN' [Lou Chih-hsien]; SAVITSKAYA, Ye.M.; BRUNS, B.P.

Swelling of carboxyl resins in water - methanol mixtures. Vysokom.
soed. 2 no.5:745-750 My '60. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(Resins, Synthetic) (Ion exchange)

LOU CHZHI-SYAN' [Lou Chih-hsien]; SAVITSKAYA, Ye.M.; BRUNS, B.P.

Exchange of inorganic ions on carboxyl cationites in water -
methanol media. Vysokom.soed. 2 no.5:751-758 My '60.
(MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(Ion exchange) (Methanol)

LIBINSON, G.S.; SAVITSKAYA, Ye.M.; BRUNS, B.P.

Sorption of the organic anion of the dye 1 (2',4' -dimethylphenylazo-2-hydroxynaphthyl-3,6-disulfonic acid on the weakly basic anion exchanger AN-15. Vysokom. soed. 2 no.10:1500-1507 0 '60.

(MIRA 13:9)

(Azo dyes) (Sorption)

SAVITSKAYA, Ye.M.; SHELLENBERG, N.N.; SHVEDOV, D.I.; SALDADZE, K.M.;
PASHKOV, A.B.; BRUNS, B.P.

Use of type KU-2 cationites for the decalcification of streptomycin solutions. Med.prom. 14 no.4:13-17 Ap '60.

(MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ION EXCHANGE) (STREPTOMYCIN)

S/020/61/136/001/033/037
B004/B056

AUTHORS: Lou Chi-sian. Savitskaya, Ye. M., and Bruns, B. P.

TITLE: Effect of Organic Solvents Upon the Properties of a
Carboxyl Cation Exchanger

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 1, pp. 151-154

TEXT: Mixtures of water and methanol are widely used for eluting organic ions which are adsorbed on carboxyl resins. However, the optimum conditions were determined empirically. The authors attempted to investigate the variations in ion exchange if water-methanol mixtures are used instead of aqueous solutions. Experiments were made with a cation exchanger which was obtained by alkaline saponification of the copolymer of methyl methacrylate and divinyl benzene. It contained only carboxyl groups as ionogenic groups. The experimental data were obtained by potentiometric titration with 0.5 N LiCl in nitrogen atmosphere according to three methods: 1) method of R. Kunin (Ref. 2); 2) Direct titration of the initial solution with and without the resin. 3) Method developed by the authors. This method is based on the determination of the equilibrial pH value of the solution in

Card 1/5

Effect of Organic Solvents Upon the Properties of a Carboxyl Cation Exchanger S/020/61/136/001/033/037
B004/B056

systems consisting of exchangers, previously neutralized to various degrees, which are put into mixtures of water and an organic solvent of various known ion strength. The results obtained by these three methods were in good agreement. Fig. 2 shows the typical dependence of the neutralization degree of the cation exchanger on the pH value in the presence of 0.1 N LiCl; 60 % CH₃OH as compared with the behavior of acetic acid. The

apparent dissociation constant $\bar{pK}$ was determined from a variety of Henderson's equation: $pH = \bar{pK} - n \log[(1 - \alpha)/\alpha]$; pH denotes the hydrogen-ion concentration of the outer solution; α is the degree of neutralization of the cation exchanger; and n is a constant. Determination in H₂O, in

H₂O with 40 %, 60 % and 95 % CH₃OH gave a linear function

$pH = f\{\log[(1 - \alpha)/\alpha]\}$ and an $n \sim 1.6$ which was independent of the methanol concentration. The following values were found for $\bar{pK}$: 0 % methanol 5.90; 40 % methanol 6.35; 60 % methanol 6.75; 95 % methanol 7.85. The strength of the acid cation exchanger drops with increasing alcohol concentration, analogously to the drop of the dissociation constant of monocarboxylic acids. Linear dependence of $\bar{pK}$ on $1/D$ (D denotes the dielectric constant)

Card 2/5

Effect of Organic Solvents Upon the Properties of a Carboxyl Cation Exchanger S/020/61/136/001/033/037
B004/B056

was found in accordance with the results of J. N. Brönsted (Ref. 12).
N. A. Izmaylov is mentioned. There are 4 figures and 12 references:
4 Soviet, 7 US, and 1 German.

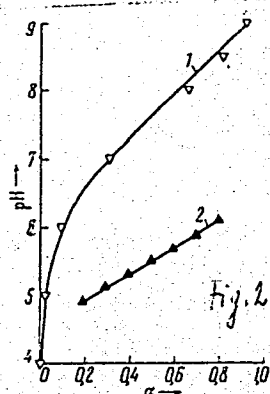
ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov
(All-Union Scientific Research Institute of Antibiotics) ✓

PRESENTED: June 27, 1960 by V. A. Kargin, Academician

SUBMITTED: June 24, 1960

Card 3/5

S/020/61/136/001/033/037
B004/B056



Card 4/5

S/020/61/136/001/033/037
B004/B056

Legend to Fig. 2. 1: cation exchanger, 2: acetic acid.

Card 5/5

✓
—

LEVITOV, M.M.; SAVITSKAYA, Ye.M.; TOVAROVA, I.I.

6-Aminopenicillanic acid and new penicillins. Antibiotiki 7 no.5:
387-398 My '62. (MIFA 15:4)

(PENICILLANIC ACID)

(PENICILLIN)

SAVITSKAYA, Ye.M.; SHELLENBERG, N.N.; LIBINSON, G.S.; BRUNS, B.P.; KOLYGINA,
T.S.; DRUZHININA, Ye.N.

Method for isolating crystalline 6-aminopenicillanic acid from
culture fluids obtained during the fermentation of the micro-
organism, *Penicillium chrysogenum*, without a precursor. Antibiotiki
7 no.5:434-437 My '62. (MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(PENICILLANIC ACID) (PENICILLIUM)

SAVITSKAYA, Ye.M.; SHELLENBERG, N.N.; LIBINSON, G.S.; BRUNS, B.P.; KOLYGINA, T.S.

Ion exchange method of isolating crystalline 6-aminopenicillanic acid from the products of the fermentative hydrolysis of penicillin.
Antibiotiki 7 no.5:437-440 My '62. (MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(PENICILLIN) (PENICILLANIC ACID)
(ION EXCHANGE RESINS)

BRUNS, B.P.; SAVITSKAYA, Ye.M.; SHELLENBERG, N.N.; LIBINSDN, G.S.;
KOLYGINA, T.S.; DRUZHININA, Ye.N.

Physicochemical properties of 6-aminopenicillanic acid -- titration
curves and its solubility. Antibiotiki 7 no.5:440-442 My '62.

(MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(PENICILLANIC ACID)

LIBINSON, G.S.; SAVITSKAYA, Ye.M.; BRUNS, B.P.

Causes responsible for the establishment of false equilibrium during ion exchange sorption of big organic ions. Dokl. AN SSSR 145 no.1:133-135 J1 '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov. Predstavleno akademikom V.A.Karginym. (Ion exchange)

PLESHKOV, B.P., kand.biolog. nauk, dotsent; SAVITSKAYTE, Ye.M., [Savickaite, E.];
YASAYTIS, A. [Jasaitis, A.], aspirant

Correlation among free amino acids in the grain and the straw of
soft wheat. Izv. TSKHA no.5:100-105 '63. (MIRA 17:7)

S/C69/63/025/001/004/008
B101/B186

AUTHORS:

Savitskaya, Ye. M., Lou Chih-hsien, Bruns, B. P.

TITLE:

Sorption of streptomycin by carboxyl cationites from
water - methanol solutions

PERIODICAL:

Kolloidnyy zhurnal, v. 25, no. 1, 1963, 66-71

TEXT: This is a study on the sorption of streptomycin by weakly cross-linked KB-4 (KB-4) cationite containing 1% divinyl benzene and by KB-4П2 (KB-4P2) cationite with medium cross-linkage containing 5% divinyl benzene, from 40-80% methanol solutions. Its object was to find out how far the change in medium (methanol being added to water) affects the ion exchange, in view of the advantages which an alcoholic elution of streptomycin offers for its industrial production. Streptomycin sulfate insoluble in methanol, was converted into hydrochloride by ion exchange. Potentiometric titration of the streptomycin base Str^{3+} showed that the latter behaves similarly in water and in ethanol. Sorption by the lithium form as well as by the hydrogen form of KB-4 decreased as the methanol content in the solution increased. Sorption of Str^{3+} by the Li form was

Card 1/3

S/069/63/025/001/004/008
B101/B186

Sorption of streptomycin ...

faster than by the H form, approached the limiting value of the Li^+ exchange capacity of the cationite, and dropped to 25% of this value in 80% CH_3OH . The absorption power of the H form was lower than that of Str^{3+} . After adding Li in the form of LiCl a pseudo-equilibrium became established and was shifted to higher adsorption on values. Increasing methanol content reduced the streptomycin sorption by the Li form and somewhat less also by the H form of KB-4P2. From 95% CH_3OH , streptomycin

was adsorbed by the H form of KB-4P2, but no longer by the Li form. Addition of Li ions caused an increase in streptomycin sorption when 60% CH_3OH was used, and a decrease when 80% CH_3OH was used, owing to a partial conversion of the cationite into the lithium form whose adsorption power is very low in this methanol concentration. Streptomycin was completely eluted from the cationites by aqueous methanolic HCl solutions. Conclusions: The difference between the pseudo-equilibrium and the actual equilibrium increases with the methanol content. Increased methanol content affects the sorption by cationites with small cross-linkage in the same way as an increase in cross-linkage affects sorption in aqueous media. There are 8 figures.

Card 2/3

Sorption of streptomycin ...

S/069/63/025/001/004/008
B101/B186

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut
antibiotikov, Moskva (All-Union Scientific Research
Institute of Antibiotics, Moscow)

SUBMITTED: December 23, 1961

Card 3/3

LIBINSON, G.S.; SAVITSKAYA, Ye.M.; BRUNS, B.P. (Moscow)

Kinetics of ion exchange processes. Part 1: Sorption of
methylene blue on sulfonated cation exchanger of the type
KU-2. Zhur.fiz.khim. 37 no.2:420-425 F '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut antibiotikov.
(Ion exchange) (Methylene blue)

LITBINSON, G. S.; SAVITSKAYA, Ye. M.; BRUNS, B. P.

Kinetics of ion-exchange processes. Part 2. Zhur. fiz. khim.
37 no. 3:641-643 Mr '63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

LIBINSON, G.S.; SAVITSKAYA, Ye.M.

Kinetics of ion exchange processes. Part 4. Zhur.fiz.khim. 37 no.10:
2330-2333 O '63. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

LIBINSON, G.S.; SAVITSKAYA, Ye.M.

Kinetics of ion exchange processes. Part 5. Zhur. fiz. khim.
37 no.12:2706-2712 D '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

LIBINSON, G.S.; SAVITSKAYA, Ye.M.

Relation between the mechanical properties of sulfocation exchanger grains and the establishment of pseudoequilibrium states during the sorption of organic ions on these grains. Dokl. AN SSSR 148 no.6:1343-1345 F '63. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
Predstavleno akademikom V.A.Karginym.
(Ion exchange resins) (Methylene blue) (Sorption)

LIBINSON, G.S.; SAVITSKAYA, Ye.M.

Kinetics of ion exchange processes. Part 3. Zhur. fiz. khim.
37 no.4:899-901 Ap '63. (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

SHENOVA, K.I.; MALITSKAYA, Ye.M.; FIDKO, B.K.

Catalytic activity of H ions in sulfonated polystyrene cation exchangers and in sulfuric acid solutions. Dokl. AN SSSR 166 no.2:402-404 Ja '65. (MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
Submitted July 7, 1964.

SAVITSKAYA, Ye.M.; NYS, P.S.; BRUNS, B.P.

Equilibrium distribution of amino acid in the water - ion exchange system. Dokl. AN SSSR 164 no.2:378-381 S '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
Submitted February 9, 1965.

YEGOROV, B.G., prof., zaslužennyy deyatel' nauki, otv.red.; VOLKOVA-PAVLOVA, red.; SAVITSKAYA, Ye.N., red.; SPIRIN, B.G., red.; UGRYUMOV, V.M., red.; FILIPPICHEVA, N.A., red.; YABLONOVSKAYA, L.Ya., red.; KORYANSKIY, G.P., red.; GRAZHDANINOV, N.A., tekhn.red.

[Research of the N.N.Burdenko Institute of Neurosurgery of the Academy of Medical Sciences of the U.S.S.R. from 1954 to 1958] Nauchnye raboty, vyshedshie iz instituta neirokhirurgii imeni akad. N.N. Burdenko AMN SSSR za 5 let, 1954-1958 gg. Pod red. B.G.Egorova. Moskva, 1959. 157 p. (MIRA 13:3)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut neyrokhirurgii.

(NERVOUS SYSTEM--SURGERY)

SAVITSKAYA, Ye. P.

"To characteristics of the various strains of tick typhus exanthematicus in experiments with monkeys."

Zhur. Mikrobiol., Epidemiol, i Immunobiol., No. 1-2, 1944.

USDP/Medicine - Rickettsia
Medicine - Typhus - Virus

"Studies of Structure and Multiplication Cycles of the Rickettsia prowazeki," A. V. Romyantsev,
M. L. Kravtsovskaya, Ye. P. Lavitskaya, B. V. Zhav, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 2

Report results of studies conducted on the Rickettsia prowazeki. Studies development
of this disease: 1) in the light muscles due to pernasal infection of latter, and 2) in the
intestines due to perineal infection. Submitted by Academician I. I. Smol'gauzen, 20 March
1947.

PA 49751

SAVITSKAYA, Ye.P.

Mechanism of action of certain antibiotics in typhus fever.
Report no.2: Effect of synthomycin and levomycetin on the
course of experimental typhus in guinea pigs. Zhur.mikrobiol.
epid. i immun. no.11:62-67 N '55. (MLRA9:1)

1. Iz Instituta epidemiologii i mikrobiologii imeni N.F.Gamalei
A'IN SSSR.

(TYPHUS, experimental,
eff. of chloramphenicol, comparison of levomycetin &
synthomycetin)
(CHLORAMPHENICOL, effects,
on exper.typhus, comparison of levomycetin & synthomycetin)

SAVITSKAYA, Ye.P.

Mechanism of action of certain antibiotics in typhus exanthematicus;
pathological histology of experimental typhus exanthematicus in
guinea pigs following synthomycin and levomycetin therapy.
Zhur. mikrobiol., epid. i immun. 27 no.1:101-105 Ja '56 (MLRA 9:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei
AMN SSSR (dir.-prof. G.V. Vygodchikov)
(TYPHUS, experimental,
eff. of chloramphenicol, histol. aspects (Rus))
(CHLORAMPHENICOL, effects,
on exper. typhus exanthematicus, histol. aspects (Rus))

Savitskaya, E. P.

✓ Influence of antibiotics on immunological processes and prophylaxis of the organism against Rickettsia during typhus infection. K. M. Loban and E. P. Savitskaya (I. V. Stalin U 2nd Med. Inst., Moscow). Zhur. Mikrobiol., Epidemiol., i Immunobiol. 27, No. 8, 102-7(1950).—Blomycin and synthomycin are effective therapeutic agents for typhus. Tests following antibiotic treatment of typhus patients revealed that formation of immune bodies occurred during the antibiotic treatment. I. A. Stekol

2/

7/22/50

YATSIMIRSKAYA-KHONTOVSKAYA, M.K.; BILIBIN, A.F.; BOCHAROVA, T.V.; SINAYKO,
G.A.; SAVITSKAYA, Ye.P.; SHATROV, I.I.

Possibility of prolonged carrying of Rickettsia prowazokii. Zhur.
mikrobiol.epid. immun. 27 no.7:33-39 Jy '56. (MLRA 9:9)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN
SSSR, Kliniki infektsionnykh bolezney i kafedry epidemiologii 2-go
Moskovskogo meditsinskogo inatituta imeni Stalina.

(RICKETTSIA PROWAZOKII

prolonged carriage in animals & men)

SAVITSKAYA, YE. P., SHTROV, I. I., YATSIMIRSKAYA, M. K., BILIBIN, A. F., BOCHAROVA, T. V.
and SINAYKO, G. I.

"Concerning the Question of the Possibility of a Prolonged Carrying of
Prowazki's Rickettsiosis." [paper read at an unidentified scientific
conference held by the institute during the first half of 1955.]
Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Typhus Division, Krontovskaya, M. K., head, Inst. Epidem and Microbiol
im. Gamaleya AMS USSR.

SO: Sum 1186, 11 Jan 57.

SAVITSKAYA, YE. P.

"Concerning the Mechanism of the Action of Certain Antibiotics During Typhus." Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Typhus Division, Krontovskaya, M .K., head. Inst. Epidem and Microbiol im. Gamaleya AMS USSR.

SO: Sum 1186, 11Jan 57.

L-8099. Mechanism of the action of some antibiotic agents in typhus cases. The pathological histology of experimental typhus in guinea pigs after treatment with sintomycin and laevomycetin. E. P. Savitskaya Zh. Mikrobiol., 1956, No. 1, 101—105; *Referat. Zh. Biol. KAim.*, 1956, Abstr. No. 88328.—An investigation was made of the morphology of the pathological process of experimental typhus treated with sintomycin (I) and laevomycetin (II), caused in guinea pigs by intracutaneous injection of rickettsia. I and II were injected daily for 4 days into the oesophagus (starting with the first day of fever) in a dose of 1 mg. to 5 g. For the morphological study the guinea pigs were killed at the height of the disease (on the 8th day after infection), after the temp. fell (15th day), and much later (after 4, 6, and 9 months). I and II relieve the temp. reaction, but do not prevent the development of the pathomorphological processes which are specific for typhus. In large doses I and II are toxic for guinea pigs and cause degenerative changes in the liver and kidneys. (Russian) **H. L. PARKS**

SAVITSKAYA, Ye. P.; LOBAN, K.M.

"Antibiotics in Treatment of Typhus,"

p. 388 Ministry of Health USSR Proceedings of the Second All-Union Conference on Antibiotics, 31 May - 9 June 1957. p. 405, Moscow, Medgiz, 1957.

SAVITSKAYA, Ye.P.; ZUBOK, L.P.

Studies on the mechanisms of action of biomycin and sekazin on
Rickettsia prowazekii. Zhur.mikrobiol.epid.i immun. 32 no.3:
98-102 Mr '61. (MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(RICKETTSIA PROWAZEKII) (AUREOMYCIN)
(ANTIBIOTICS)

SAVITSKAYA, Ye.P.; PLOSKIREV, N.V.; TSURIKOV, F.F.

Cultivation of *C. burnetii* in tissue cultures. Zhur. mikrobiol.
epid. i immun. 32 no.6:121-125 Je '61. (MIRA 15:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(TISSUE CULTURE) (RICKETTSIA)

SAVITSKAYA, Ye.P.

Method of determining the sensitivity of Rickettsia burnetii
to antibiotics in vitro. Antibiotiki 8 no.6:512-516 Je'63

(MIRA 17:3)

1. Institut epidemiologii i mikrobiologii imeni N.F.Gamalei
AMN SSSR.

SAVITSKAYA, Ye.P.

Comparative effects of biomycin and sekazin on Rickettsia prowazekii and mooseri. Zhur. mikrobiol. epid. i immun. 31 no.7:76-81 J1 '60.
(MIRA 13:9)

1. Iz Instituta epidemiologii i mikrobiologii im. Gamalei AMN SSSR.
(RICKETTSIA) (ANTIBIOTICS)

SAVITSKAYA, YE. V.

SAVITSKAYA, YE. V. -- "Innervation of the Left Coronary Artery." *(Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Leningrad Pediatric Medical Inst, Leningrad, 1955.

SO: Knizhnaya Letopis' No. 31, 30 July 1955.

*For the Degree of Candidate in Medical Sciences.

MARGORIN, Ye.M.; KAYSAR'YANTS, G.A.; MOROZOVA, T.I.; SAVITSKAYA, Ye.V.

Fedor Ivanovich Val'ker; an obituary, Arkh. anat. gist. i embr.
32 no.4:108-109 O-D '55 (MLRA 9:5)

(OBITUARIES,
Val'ker, Fedor I.)

MARGORIN, Ye.M.; KAYSAR'YANTS, G.A.; MOROZOVA, T.I.; SAVITSKAYA, Ye.V.

In memory of F.I.Val'ker; first anniversary of his death. Vest.
khir. 77 no.3:145-146 Mr '56. (MLRA 9:7)
(VAL'KER, FEDOR IVANOVICH, 1890-1955)

SAVITSKAYA, Ye.V., kand.med.nauk (Leningrad, Liteyny pr., d.49, kv.7)

Surgical anatomy of the intra-atrial septum [with summary in English]
Vest.khir. 81 no.7:80-85 J1 '58 (MIRA 11:8)

1. Iz kafedry operativnoy khirurgii (zav. - prof. Ye.M. Margarin)
Leningradskogo pediatricheskogo meditsinskogo instituta.
(CARDIAC SEPTUM, anat. & histol.
surg. anat. (Rus))